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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,787	11/19/2002	David S. Bettinger		4746

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EXAMINER

HEWITT, JAMES M

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 11/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/065,787

Applicant(s)

BETTINGER, DAVID S.

Examiner

James M Hewitt

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED ACTION

Specification

Applicant is reminded of the proper language for an abstract of the disclosure.

The legal phraseology often used in patent claims, such as "means" and "said," should be avoided.

Claim Objections

Claims 2-4 are objected to because of the following informalities:

In claim 2 line 1, "Figures" should be deleted.

In claim 3 lines 5-6, the phrase "and in close proximity to said cylindrical guide rings" should be deleted. It is unnecessary to state that the chamber, which is constrained and circumscribed by the guide rings, is in close proximity to the guide rings.

In claim 3 line 7, "each" should be inserted before "said"

Note that claim 4 is also objected to since it depends from claim 3.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHughs (US 6,131,960) in view of Fuoss (US 6,012,745).

With respect to claim 1, McHughs discloses a packing sealed expansion joint (14) comprising: at least one generally cylindrical resilient and elastic seal (44) disposed in an annular packing chamber (42) defined between telescopically arranged outer (20) and inner (24) pipe members. McHughs fails to teach an outer circumferentially tensioned band and clamp positioned about the outer pipe member. Fuoss teaches a pipe connection comprising two overlapping pipes, a packing disposed between the ends of the overlapping pipes and a band clamp positioned about the circumference of the outer pipe to brace the outer pipe and to seal and clamp the inner pipe. In view of Fuoss' teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify McHughs with a band clamp about his outer pipe in the region of the packing in order to further brace the outer pipe (against vibration and other external forces) and to seal and clamp the inner pipe.

Note that the clamp about McHughs' device would produce a compressive force to radially deflect the outer pipe member and compress and deflect the elastic seal so that the outer and inner pipe members and the seal create and maintain a bearing and friction-loaded sealed relationship for fluid flow and varying temperatures between adjacent ends of two conduits during axial sliding and rotational relative movement of said outer and inner pipe members.

With respect to claim 2, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a second band clamp about

Art Unit: 3679

McHughs' second resilient and elastic seal (58), since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

With respect to claim 3, whereby said annular packing chamber (42) is further volume constrained and circumscribed for each said generally cylindrical resilient and elastic seal by at least two cylindrical guide rings (34/40) attached to one of said outer and inner pipe members and extended radially between said outer and inner pipe members and selected to provide a fixed initial volume for each said generally cylindrical resilient and elastic seal.

With respect to claim 4, whereby said compressive force is further selected to produce static compressive frictional forces on the contact surfaces of each said generally cylindrical resilient and elastic seal, said cylindrical guide rings, and said outer and inner pipe members to resist and prevent relative movement due to axial internal pressure, vibration, and transient operational loads.

With respect to claim 5, McHughs fails to teach that his outer and inner pipe members are composed of polymer composites. McHughs employs metal as the material for his pipe members. Nevertheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use polymer composites to form the material of McHughs' outer and inner pipe members since it has been held to within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Art Unit: 3679

With respect to claims 6 and 7, as the claimed fluids are not positively claimed as part of the invention (the expansion joint), the Examiner has not afforded significant patentable weight to the fluids to be used in the joint. McHughs is considered to read on claims 6 and 7 insofar as McHughs' device is considered capable of transporting cryogenic fluid or rocket engine fuel reactant.

With respect to claim 8, whereby said outer circumferentially tensioned band and clamp is selected to provide means (17) for manual and power driven adjustment. The tensioning screw can be manually adjusted as by a screwdriver or adjusted by a power tool such as a drill.

Conclusion

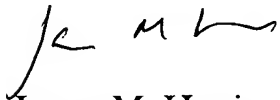
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lacey, Engel, Yahagi et al, Kwok, Oetiker, Coats, Roberts, Haskell, and Thomas all constitute prior art devices considered by the Examiner to be relevant to the claimed invention(s).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M Hewitt whose telephone number is 703-305-0552. The examiner can normally be reached on M-F, 930am-600pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on 703-308-1159. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 3679

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

A handwritten signature in black ink, appearing to read 'J M H', is positioned above the printed name.

James M. Hewitt
Patent Examiner
Technology Center 3600